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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/021,310	10/22/2001	Laszlo Man	3191/1G988-US1	9871

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805 Third Avenue
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EXAMINER

VANAMAN, FRANK BENNETT

ART UNIT	PAPER NUMBER
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3618

DATE MAILED: 06/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/021,310

Applicant(s)

Mán

Examiner

Vanaman

Art Unit

3618



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Mar 13, 2003
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 5-11, 13-16, 18, 23-30, and 32-67 is/are pending in the application.
- 4a) Of the above, claim(s) 5-8, 18, 24, 27, 29, 32, and 37-67 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 9-11, 13-16, 23, 25, 26, 28, 30, and 33-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

Art Unit: 3618

Status of Application

1. Applicant's amendment, filed March 13, 2003, has been entered in the application. Claims 1, 2, 5-11, 13-16, 18, 23-30, and 32-67 are pending, claims 3, 4, 12, 17, 19-22 and 31 having been canceled. Claims 5-8, ¹⁸24, 27, 29, 32, and 37-67 are withdrawn as being directed to a non-elected species, the election having been made without traverse, in paper No. 5.
2. An office action on claims 1, 2, 9-11, 13-16, 23, 25, 26, 28, 30 and 33-36 follows.

Specification

3. The disclosure remains objected to because of the following informalities: on pages 31-32, figures 10-17, 22 and 23 are not separately described.

Appropriate correction is required.

Claim Objections

4. Claims 13 and 23 are objected to because of the following informalities: in claim 13, line 1, "ration" should be --ratio--; claim 23 remains written to depend from claim 20 which has been canceled by the most recent amendment. Appropriate correction is required. For the purpose of this office action, claim 23 is assumed to be dependent from claim 1.
5. Claims 9, 25, 28, 33 (see lines 1-3), 34 (see lines 1-2), and 35 (see lines 1-2) are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. In view of the recitations added to claim 1, particularly at lines 18-21, it appears as though the cited portions of the recitations of the above noted claims do not further limit the structure which applicant has added to claim 1.

Art Unit: 3618

Claim Rejections - 35 USC § 112

6. Claims 1, 2, 9, 10, 11, 13-16, 25, 26, 30 and 33-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1, lines 9-10, the recitation of the rpm ratios setting themselves is confusing in that it appears as though the interactive rotary connection performs this function; in claims 15 and ¹⁶16, the recitation of the "first mode" and "second mode" is confusing in view of the recitation of start-up and driving modes claim 1-- it is not clear whether these recited first and second modes are different modes or different terms referring to the same modes; for consistency of recitation, an element or condition should be referred to by the same term throughout the claims;

Claim Rejections - 35 USC § 103

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 2, 9, 10, 11, 13-16, 25, 26, 30 and 33-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tabata et al. in view of Fujita et al. (US 4,869,332). Tabata et al. teach a vehicle having a power train including a combustion engine (12) with a drive shaft, a transmission (18) with an input shaft, an energy converter (14) which can operate at least as a motor and generator; with an energy convertor shaft (14r) turning at a different rate; which has a rotary transfer device "arranged" on the drive shaft, in the form of an interactive connection (16) including at least one gear pair (16c, 16s, 16r), the interactive connection being connectable to the drive shaft, which can select a plurality of rpm ratios (through the operation of the two clutches CE1 and CE2) so as to function in at least two operating modes including a start-up mode (Mode 9-- for starting the combustion engine, wherein torque flows from the convertor to the engine) and a driving mode (Mode 1-- for propelling the vehicle, wherein torque is delivered to the vehicle drive train) and a generation mode (Mode 3-- for charging while driving, wherein torque

Art Unit: 3618

flows to the convertor, and wherein an rpm ratio of between 1:2 and 2:1-- in this case about 1:1-- is set); the driving shaft extending from a rear portion of the engine, facing the transmission, where the interactive connection is located; there being provided a torque coupling device (C1, C2) for connecting and disconnecting the transmission from the drive shaft; the energy convertor and engine shafts being parallel. The reference of Tabata et al. fails to teach the connection to the energy convertor as being a pair of fixed-ratio gear pairs (transfer elements, each forming a torque path), including a pair of overrunning clutches (one per gear pair), wherein each of the respective gear sets is employed for one of a pair of modes. Fujita et al. teach an interactive connection between an engine drive shaft and an electrical energy convertor (2) mounted on a shaft (3), including first and second pairs of fixed-ratio gear sets which serve as transfer elements (5 & 6; 7 & 9) wherein each gear- or transfer element- set forms a torque path for a respective one of two modes, the flow through the path being governed by a pair of overrunning clutches (4, 10-- one per gear set), which are located upstream or downstream of a source of torque, dependent upon the direction of flow of the torque. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a dual gear set transfer device such as taught by Fujita et al. in place of the transfer device (16) taught by Tabata et al. in order to reduce the complexity of the connection between the convertor and drive shaft, and to allow fixed transfer rates and rpm ratios between the respective operating modes of the vehicle of Tabata et al. The reference of Tabata et al. as modified by Fujita et al. fails to specifically teach the rpm ratio in the starting mode as being smaller than the ratio in the charging mode, and the particular range of ratios for the starting mode. It would have been obvious to one of ordinary skill in the art at the time of the invention to adjust the relative ratios for the starting and charging modes, for example such that the rpm ratio in the starting mode is smaller than the ratio in the charging mode, for the purpose of adjusting the relative speeds of the rotating components, in order to insure that charging is accomplished in a most efficient speed range for the convertor, and to insure that the engine is rotated at an

Art Unit: 3618

appropriate speed for starting, when the convertor is running in a speed where it can develop sufficient torque to start the engine.

Response to Comments

8. Applicant's comments have been carefully considered. As regards the upstream/downstream recitation, applicant's clarification is appreciated, and will be employed in the interpretation of these claims. As regards applicant's comments directed to the reference of Tabata et al., please note that co-linear or coaxial axes are parallel to the extent claimed, in that a relative angle of inclination between the two is zero. As regards the selection of speed ranges associated with the electric device and the drive, note that clutches CE1 and CE2 allow the selection of at least two ratios, and the combined arrangement with Fujita et al. similarly teaches two transfer ratios as set by pair 5/6 or pair 7/9. As regards applicant's characterization of the arrangement of Fujita et al. as lacking a teaching of the arrangement 'at one side of the crankshaft', note figure 1, which shows the arrangement offset to a side of the crankshaft (8). Applicant's comments as to how a combination of Tabata et al. and Fujita et al. might be combined are noted, however the combination would not be deemed to be limited by the scenario described by applicant, and in this case, it would be deemed obvious to provide a dual gear set transfer device such as taught by Fujita et al. in place of the transfer device (16) taught by Tabata et al. in order to reduce the complexity of the connection between the convertor and drive shaft, and to allow fixed transfer rates and rpm ratios between the respective operating modes of the vehicle of Tabata et al., the use of fixed transfer rates advantageously simplifying the control of the speeds of the various interacting elements: engine, electric device, and transmission.

Art Unit: 3618

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to F. Vanaman whose telephone number is (703) 308-0424. Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is (703) 308-1113.

As of May 1, 2003, any response to this action should be mailed to:

Mail Stop ____
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

or faxed to :

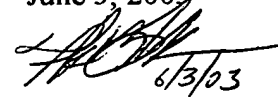
(703) 305-3597 or 305-7687 (for formal communications intended for entry;
informal or draft communications may be faxed to the same number but should be
clearly labeled "UNOFFICIAL" or "DRAFT")

The Office has also established electronic fax servers for Technology Center 3600 as follows:

703-872-9326 (Official communications)
703-872-9327 (Official After Final communications)
703-872-9325 (Customer Service)

F. VANAMAN
Primary Examiner
Art Unit 3618

F. Vanaman
June 3, 2003



6/3/03